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INFORMATION REPORT

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1. The Metallurgicheskii Zavod Dzerzhinskii (Dzerzhinsk Metallurgical Plant) was in the northern part of Dneprodzerzhinsk ($48^{\circ}30'N/34^{\circ}37'E$). The plant had spur tracks to the Dnepropetrovsk ($48^{\circ}27'N/34^{\circ}59'E$) - Kiev ($50^{\circ}27'N/30^{\circ}32'E$) double-track railroad line and a harbor, located near the blast furnace department.
2. The plant was founded in 1886. When the Soviets retreated in 1941, they destroyed part of the plant. The plant was reconstructed during the German occupation and was called the "Kamenskoye Ironworks". During the Soviet reoccupation the plant was again seriously damaged, especially the southeastern and southern plant sections. The reconstruction of the plant was started immediately after the end of the war. Parts of the blast furnace department, of the agglomerating installation (Agglomeratsionnaya), and the steel and rolling departments resumed operation in early 1948. Most of the seriously damaged southeastern section of the plant was reconstructed by late 1949. The restored installations are said to be modern.
3. The plant consisted of a blast furnace department with seven blast furnaces; a steel department consisting of the open-hearth plants Nos. 1, 2, and 3, and of 1 Bessemer converter plant; a rolling department composed of 1 blooming mill, 1 universal rolling mill, 1 rolling mill for rails and girders, 1 rolling mill for medium structural shapes, 1 rolling mill for small structural shapes, 1 wire rolling mill, and 1 sheet rolling mill; 2 foundries; 1 wheel set department with 1 axle forge and, allegedly, 1 tire rolling mill; several machine shops, including 1 latheshop equipped with 1 turning and boring mill for especially large pieces, and 1 roll turning latheshop; and 1 punching department for artillery shells. The latter department was allegedly separated from the rest of the plant after the war and became Plant No. 6. Secondary and auxiliary installations included 1 agglomerating installation, 1 coking plant, 1 dolomite kiln installation, 1 brickyard, 1 sawmill, 1 cement factory, and storage dumps for ore, flux materials, coke, and coal. (1)
4. In the fall of 1949, the blast furnace department allegedly had seven blast furnaces set up in groups. The northern group consisted of blast furnaces No. 7 and 8 which were the most modern and largest furnaces in the plant. The total daily capacity of the furnaces No. 1, 2, 3, 5, and 6 was 2,000 tons, the daily capacity of furnace No. 7 was 800 to 900 tons, and of furnace No. 8 was 1,200 to 1,400 tons of pig iron. (2)

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According to Soviet press reports, the 1951 pig iron production was scheduled to be increased 7.5 percent over 1950 without adding new production facilities. This would correspond to an improvement of the average utilization coefficient from 0.82 to 0.78. In late 1951, the modern blast furnace No. 7 reached a utilization coefficient of 0.71 to 0.72. The present production capacity of the plant definitely exceeds the prewar figure and may range from 1.3 to 1.5 million tons of pig iron per year. The improvement was achieved by expanding the blast furnace capacity and by modernizing the equipment, resulting in a better utilization of the installations.

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- (3) [redacted] the coking plant had five batteries totaling 215 chambers. The daily capacity ranged from 4,500 tons to 5,000 tons of coke. The nitrogen plant is not shown in the sketch.
- (4) According to previous information, in 1941 the steel department had three Bessemer converters of 15 tons capacity each and 10 open-hearth furnaces including 4 with capacities of 35 to 35 tons, 1 with a capacity of 60 tons, 1 of 75 tons, 1 of 110 tons, 1 of 145 tons, 1 of 185 tons and 1 of 200 tons. The annual capacity was 341,000 tons of open-hearth steel and 389,000 tons of Bessemer steel. [redacted] the steel department was considerably expanded after the war by the addition of 3 medium and 1 large open-hearth furnaces, and 1 Bessemer converter. However, Soviet postwar press reports only mention up to ten open-hearth furnaces. The postwar production of the open-hearth furnaces has been greatly increased. The Soviet press published the following average annual production figures:

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1935 - 2.80 tons of steel per square meter of hearth surface in 24 hours

1940 - 3.31 " " " " " " " "

1946 - 3.65 " " " " " " " "

1948 - 5.29 " " " " " " " "

January to

June 1950-

6.32 " " " " " " " "

In 1951, the average production of the open-hearth furnaces was increased to 6.54 tons per square meter daily for the normal smelting process and to 8.24 tons for the rapid smelting process. The number of rapid smeltings was also increased considerably, especially in the modern open-hearth Department No. 2 which was equipped with larger furnaces. In mid-1951, Department No. 2 almost doubled its 1940 steel production. In 1951, the total production of open-hearth steel was scheduled to be 25 percent higher than in 1950 without adding new production installations. The present annual productive capacity is estimated at 1.3 million tons of open-hearth steel and 0.3 million tons of Bessemer steel. [redacted]

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the plant had, in 1940 and/or 1941, an old and a new blooming mill with an annual capacity of 1.63 million tons of blooms, a universal rolling mill with an annual capacity of 240,000 tons, a girder and rail rolling mill with an annual capacity of 220,000 tons, a structural steel rolling mill for medium sized shapes with an annual capacity of 110,000 tons, and a rolling mill for small structural shapes with an annual capacity of 170,000 tons, a wire rolling mill with an annual capacity of 145,000 tons, and a rolling mill for plates and sheets with an annual capacity of 92,000 tons of rolled products. According to source, the old installations have been restored and put into operation. It is also known from Soviet press reports that

1951 production was scheduled to be 38 percent more than the 1950 production without adding new installations. According to Soviet press publications of mid-1951, the requirements of the rolling mill departments could not be met, since the high raw steel production of the ironworks. Raw steel therefore, had to be supplied from other plants.

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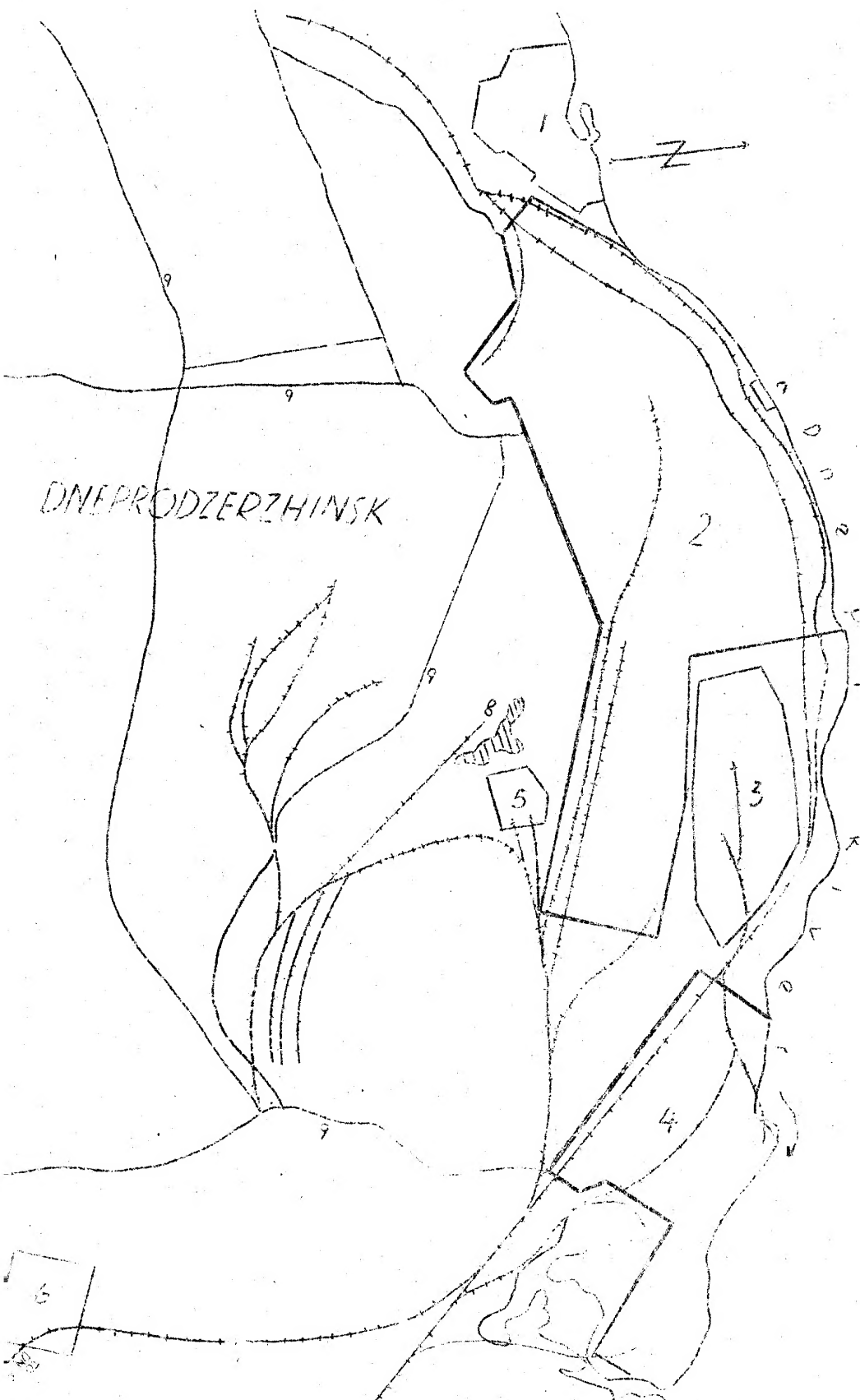
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- (5) [redacted] the DNEP Steam and Power Plant in Dneprodzerzhinsk had an installed capacity of about 200,000 kw. in 1949 and 1951 and was connected by a 150,000 volt line with the Dnepro GMS hydro-electric station near Zaporozhye (47°49'N/35°11'E). The plant-owned steam and power station of the Dneprodzerzhinsk Ironworks had an installed capacity of about 21,000 kw. The prewar electric power consumption of the metallurgical plant, including the coke plant, and of the town and the railroad car factory amounted to 26,000 kw.

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Location Sketch of the Dzerzhinsk Metallurgical Plant.

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Attachment 1

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Legend:

1. GRES Steam and Power Plant.
2. Dzerzhinskiy Ironworks
3. Gazeta Pravda Railroad Car Plant.
4. Coking plant.
5. Transformer station.
6. Brickyard.
7. Harbor.
8. Lake.
9. Streets.

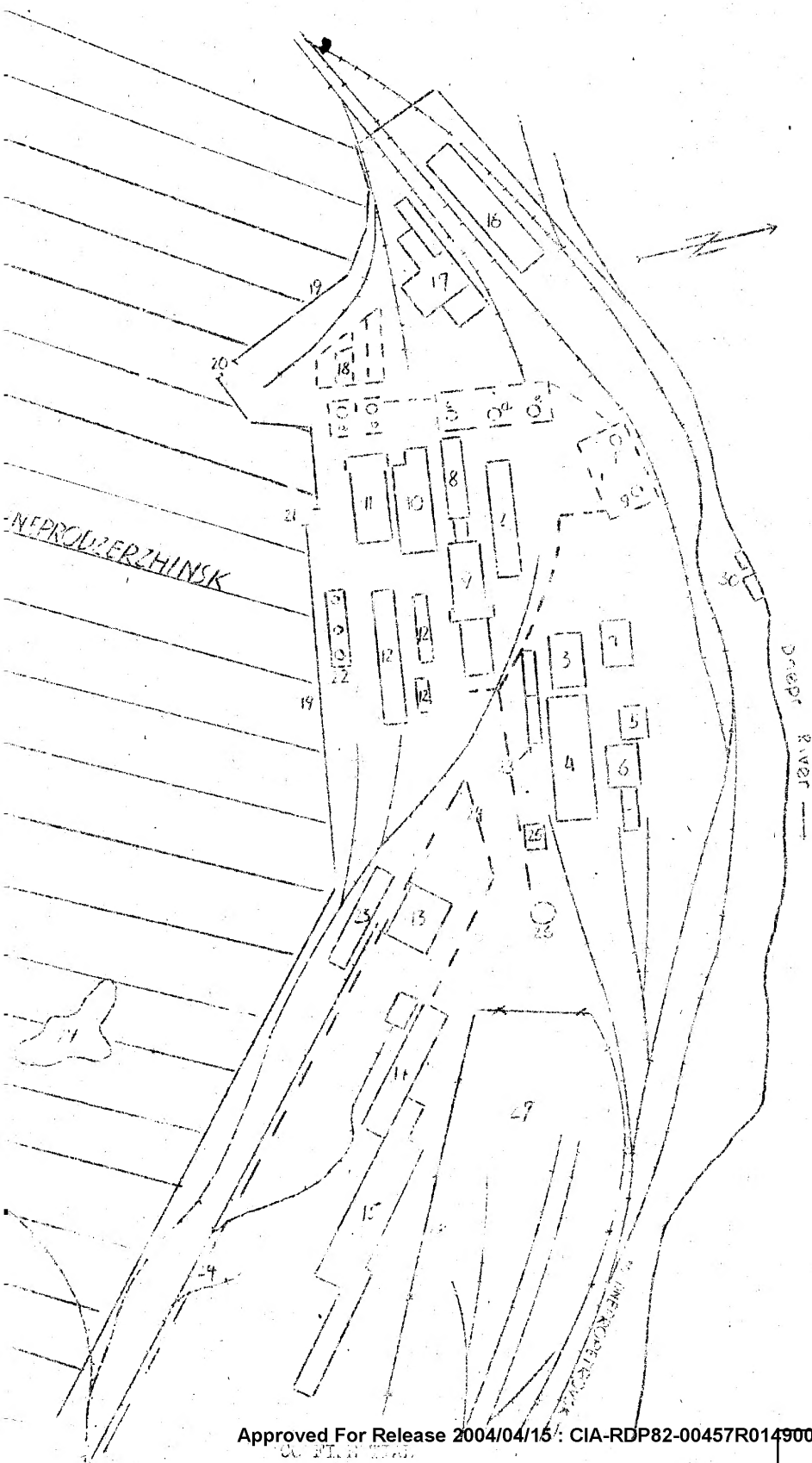
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Legend, see next page

Attachment 2

- 1 -

Layout Sketch of the Dzerzhinskiy Metallurgical Plant.

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Attachment 2

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Legend:

1. Blast furnace department consisting of 7 blast furnaces with hot-blast stoves, blast-furnace gas cleaning installations, and foundry shops.
a, b, c, d, and e are Blast Furnaces Nos. 1, 2, 3, 5, and 6.
f, and g are Blast Furnaces Nos. 7 and 8.
2. Open-hearth Plant No. 2, consisting of 5 or 6 open-hearth furnaces with a capacity of 90 to 110 tons each.
3. Bessemer plant, equipped with 3 or 4 converters of 16 tons each.
4. Rolling mill for rails and girders.
5. Boilerhouse with coal-fired boilers.
6. Power plant, allegedly equipped with 3 generators of 1,000 kw. each for direct current, and 2 turbo-generators for alternating current, with an installed capacity of 8,000 kw.
7. Building housing the blowers.
plant
8. Open-hearth No. 1, equipped with 4 open-hearth furnaces with a capacity of about 40 tons each.
9. Rolling mill, for small structural shapes, and wire rolling mill.
10. Rolling mill, for medium structural shapes.
11. Rolling mill.
12. Repairshop and machine shops; foundries; pattern making shop; wheel set department with 1 axle forge, equipped with 2 Soviet 2-ton steam hammers, 3 American 1-ton electric hammers, 2 German and 1 American steam hammers of 0.75 ton each, two 10-ton cranes, and 3 annealing furnaces. Allegedly, there was also a tire rolling mill.
13. Open-hearth Plant No. 3, equipped with 4 open-hearth furnaces of 150 to 180 tons capacity each.
14. Blooming mill.
15. Universal rolling mill.
16. Agglomerating installation (Agglomerieanlage), with gas-fired roasting furnaces.
17. Slag processing installation.
18. Storage dump for coke, ore, and fluxes.
19. Plant boundary.
20. Entrance.
21. Main entrance.
22. Sintering installation (Sinteranlage), equipped with 1 or 4 stoves and 2 mills.

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attached, 2

- 3 -

23. Workshops or installations of unknown use.
24. Above-ground gas pipe line from the coking plant to the ironworks.
25. Water basin.
26. Gas tank.
27. Gasota - ravia Railroad Car Plant.
28. Fence of the railroad car plant.
29. Lake.
30. Harbor.

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